AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical line terminal device comprising:

an optical transmitter to receive downstream information, and output downstream light pulses that represent the downstream information;

an optical receiver to receive upstream light pulses and convert the upstream light pulses into upstream information; and

a controller connected to the optical transmitter and the optical receiver, the controller including:

a memory to store a first identifier and a second identifier, the first identifier representing a first optical device that is connected to an end of a single network cable, the second identifier representing a second optical device that is to be connected to the end of the single network cable after the first optical device has been physically removed from the end of the single network cable; and

a processor connected to the memory to prepare the downstream information for the optical transmitter, and receive the upstream information from the optical receiver.

2. (Previously Presented) The device of claim 1 wherein the downstream information includes the first identifier when the first optical device is connected to the end of the single network cable, and the second identifier when the second optical device is connected to the end of the single network cable.

3. (Previously Presented) The device of claim 2 wherein the first identifier is removed from the downstream information and replaced with the second identifier when the first optical device fails to respond to the downstream information.

4. (Original) The device of claim 2 wherein the first optical device is an optical network terminal.

5. (Original) The device of claim 4 wherein the second optical device is an optical network terminal.

6. (Currently Amended) An optical terminal device comprising:

optical transmitter means for receiving downstream information, and outputting downstream light pulses that represent the downstream information;

optical receiver means for receiving upstream light pulses and converting the upstream light pulses into upstream information; and

controller means, the controller means including:

memory means for storing a first identifier and a second identifier, the first identifier representing a first optical device that is connected to an end of a single network cable, the second identifier representing a second optical device that is to be connected to the end of the single network cable after the first optical device has been physically removed from the end of the single network cable; and

processor means connected to the memory means for preparing the downstream information for the optical transmitter, and receiving the upstream information from the optical receiver.

7. (Previously Presented) The device of claim 6 wherein the downstream information includes the first identifier when the first optical device is connected to the end of the single network cable, and the second identifier when the second optical device is connected to the end of the single network cable.

8. (Previously Presented) The device of claim 7 wherein the first identifier is removed from the downstream information and replaced with the second identifier when the first optical device fails to respond to the downstream information.

9. (Original) The device of claim 7 wherein the first optical device is an optical network terminal.

10. (Original) The device of claim 9 wherein the second optical device is an optical network terminal.

11. (Currently Amended) A method of operating an optical line terminal (OLT), the method comprising:

periodically sending a first message to ~~an end of a single cable to be received by~~ a first optical device connected to an end of a single cable, the first message including a first identifier;

determining whether the first optical device has failed to respond to the first message a predetermined number of times; ~~and~~

sending a second message to the end of the single cable ~~to be received by a second optical device~~ when the first optical device fails to respond the predetermined number of times, the second message having a second identifier that represents ~~the~~ a second optical device, ~~only one~~ the second optical device being connected to the end of the single cable ~~at a time~~ after the first optical device has been physically removed from the end of the single cable;

determining if the second optical device has responded to the second message with the second identifier; and

sending a third message with the first identifier that represents the first optical device when the second optical device fails to respond to a number of second messages.

12. (Currently Amended) The method of claim 11 and further comprising~~: determining if the second optical device has responded to the second message with the second identifier; and~~ marking the second identifier as an active identification number when the second optical device responds to the second message.

13. (Cancelled)

14. (Currently Amended) The method of claim ~~13~~ 11 and further comprising:

determining if the first optical device has responded to the third message with the first identifier; and

marking the first identifier as an active identification number when the first optical device responds to the third message.

15. (Currently Amended) The method of claim ~~13~~ 11 and further comprising:

determining if the first optical device has responded to the third message with the first identifier; and

sending the second message with the second identifier that represents the second optical device when the first optical device fails to respond to a number of third messages.

16. (Original) The method of claim 11 wherein the first optical device is an optical network terminal.

17. (Original) The method of claim 16 wherein the second optical device is an optical network terminal.

18. (Currently Amended) A method of servicing a network, the network having a first optical device connected to an end of a single network cable to receive network traffic, the first optical device having a first identifier, the method comprising:

associating a second identifier with the end of the single network cable so that the first optical device continues to receive network traffic, the second identifier representing a second optical device that is a replacement for the first optical device, the second optical device not being connected to the end of the single network cable when the second identifier is associated with the end of the single network cable; and

dispatching a technician to the end of the single network cable to service the first optical device, the first optical device continuing to receive network traffic until the first optical device is disconnected from the network by the technician.

19. (Previously Presented) The method of claim 18 and further comprising:

removing the first optical device from the end of the single network cable; and

installing the second optical device to the end of the single network cable.

20. (Previously Presented) The method of claim 18 and further comprising:

inspecting the first optical device and determining whether the first optical device can be fixed within a predefined period of time;

fixing the first optical device when the first optical device can be fixed within the predefined period of time;

removing the first optical device from the end of the single network cable when the first optical device can not be fixed within the predefined period of time; and

installing the second optical device to the end of the single network cable after the first optical device has been removed.

21. (Previously Presented) A network device comprising:

a memory to store a first identifier that represents an end of a single network cable, a second identifier that represents a first network device that is connected to the end of the single network cable, and a third identifier that represents a second network device that is connectable to the end of the single network cable, the second and third identifiers being associated with the end of the single network cable; and

a processor connected to the memory to generate information to be sent to the end of the single network cable.

22. (Previously Presented) The network device of claim 21 wherein the information generated by the processor includes the second identifier of the first network device when the first network device responds to the information, and the third identifier of the second network device only when the first network device fails to respond to the information a predetermined number of times.

23. Cancelled

24. (Currently Amended) A method of servicing a network having ~~an end of a single cable~~ a number of cables and a functioning network device connected to ~~the~~ an end of ~~the~~ a single cable of the number of cables, the method comprising:

associating a replacement network device with the end of the single cable when the functioning network device is to be serviced so that the functioning network device continues to receive network information, the replacement network device not being connected to the end of the single network cable when the replacement network device is associated with the end of the single network cable;

detecting when the functioning network device no longer receives the network information; and

sending the network information to the replacement network device when the functioning network device no longer receives the network information.

25. (Previously Presented) The method of claim 24 wherein the functioning network device is fully functioning.

26. (Previously Presented) The method of claim 24 wherein the functioning network device is only partially functioning.

27. (Previously Presented) The method of claim 26 and further comprising:

removing the functioning network device from the end of the single cable after the replacement network device has been associated to the functioning network device;

reinstalling the functioning network device to the end of the single cable if full functionality can be provided with the functioning network device within a predetermined period of time;

installing the replacement network device to the end of the single cable if full functionality can not be provided with the functioning network device within a predetermined period of time; and

alternately sending the network information to the functioning network device and the replacement network device until one of the devices receives the network information.